

ORIGINAL ARTICLE

Factors Affecting Utilization of Skilled Birth Attendants by Women in Northern Zambia

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ABSTRACT

Background: World Health Organization (WHO) strongly advocates for 'skilled care at every delivery' to reduce the global burden of 536,000 maternal deaths, 3 million still births and 3.7 million newborn deaths each year. Improving delivery care is an essential element of attaining improved maternal and child health.

In the more developed countries, skilled attendance at delivery is about 99.5% where as that of Africa is 46.5% (WHO, 2008) and Zambia was at 47% in 2008 (2007 ZDHS) below the WHO target of 85% in 2010 (WHO, 2005).

More than half of Zambian births (52%) occur at home. Kasama district has low institutional deliveries with more than half (56%) of pregnant women delivering at home without the assistance of a skilled attendant (Kasama District Health Action Plan, 2010). The number of deliveries conducted by skilled birth attendants in Kasama is lower than the national figures. This underscores the need to investigate factors responsible for low use of skilled attendants at birth.

The main purpose of the study was to identify factors affecting utilization of skilled attendants at birth by pregnant women in Kasama district in order to help contribute to the reduction of maternal and child complications.

Methodology: The study was conducted in Kasama district in Northern Province of Zambia. The study used the triangulation approach method to collect data which included one semi structured interview schedule which

was administered to 340 eligible women (170 cases and 170 controls) who had children aged six months and below and those who may have lost a child during or after delivery in the first two quarter of 2011 accessing various health services at three selected health centres under study namely Lukupa, Chisanga and Location. This was done to ensure that the reasons for the loss of a child during or after delivery which could yield useful information about the care given during labour and after delivery were captured.

In this study, the exposure of interest was skilled delivery and therefore the exposed were women who were delivered by unskilled birth attendants while the unexposed were those who were delivered by skilled birth attendants. Mothers who were delivered by skilled birth attendants were controls while those who were delivered by unskilled birth attendants were cases. Three clinics with delivery facilities were conveniently selected from the 31 government health centres in Kasama. The estimated number of pregnancies (5.4%) and deliveries (5.2%) for each clinic was considered in order to correctly identify clinics with the lowest deliveries.

Three focus group discussions were also conducted one at each selected health centre. The health centre staff, TBAs and women of child bearing age (15-49 years) in the catchment areas participated in the focus group discussions. Women to be included in the focus group discussions were purposely selected. In order to ensure that the findings were valid, statistical significant was set at $p < 0.05$.

Results: One of the most interesting findings of this study was that the consultation of the services of TBAs by

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pregnant women did not affect their utilization of the skilled delivery services and most TBAs are educating women on HIV/AIDs. Therefore, it did not matter whether a woman consulted the services of TBAs for them to use the services of skilled attendants at birth.

However, the study found that majority of the cases 131(77.1%) had a problem with male midwives attending to women during delivery compared to the controls 115(67.7%). Respondents who were not comfortable with male midwives attending to women during labour/delivery were 1.271 [OR (95%CI) = 1.271 (1.029, 1.570)] more likely to be delivered by unskilled birth attendants than those who were comfortable about it as they believe that it is against their tradition for a man other than their husbands to see their nakedness. The study also found that majority of the pregnant women take traditional herbs during pregnancy to quicken labour and prevent obstructed labour as they believe that most of the men end up having extra marital affairs when their wives are pregnant and this puts the pregnant women at risk of obstructed labour. The study discovered that majority of the cases 46(27.1%) took the traditional herbs in their last pregnancy compared to the controls 14(8.2%). Respondents who took the traditional herbs on their last pregnancy were 1.717 [OR (95% CI) = 1.717 (1.407, 2.096)] more likely to be delivered by unskilled birth attendants than those who did not take the traditional herbs.

The study also found out that the knowledge levels of women on danger signs of pregnancy, labour and puerperium was alarmingly lower than expected. Majority of the women could not identify most of the danger signs of pregnancy, labour and puerperium. Sixty seven point seven percent of the cases and 52.9% of the controls perceived dizziness as not being dangerous during pregnancy while majority of the controls 99(58.2%) and cases 93(54.7%) perceived fitting as not being dangerous during pregnancy. These are danger signs of pregnancy which should be known by every pregnant woman.

Conclusion: The study found out that women are shunning delivering in health facilities by skilled attendants because of the presence of male midwives at the health facilities, use of traditional herbs to quicken labour and low levels of knowledge of danger signs of pregnancy, labour and puerperium. These factors and

deficiencies need urgent attention for the district to reduce maternal and child suffering. Addressing these factors and deficiencies will not only contribute towards achievement of millennium development goals (MDGs) but also to the overall improvement of maternal and child health. The presence of TBAs in the communities did not affect the women's utilization of skilled attendants at delivery.

INTRODUCTION

Every year over 500, 000 women die of pregnancy and childbirth related complications globally. Of these, 99% occur in developing countries and mostly in Sub-Saharan Africa¹. Thus maternal mortality is the indicator with the widest disparity between developed and developing countries. Improving the health of women and children and reducing their death during this critical period therefore remains a global priority.

It has been estimated that 88-98% of these deaths are avoidable². Most (70%) of the pregnancy-related complications are related to five direct obstetric conditions which include post-partum haemorrhage, puerperal sepsis, pre-eclampsia and eclampsia, obstructed labour and abortion, all of which are preventable³⁻⁴.

The health care that a mother receives during pregnancy and delivery is crucial in preventing complications which lead to disability or death of the mother or child. Labour and delivery are the shortest and most critical period during pregnancy and childbirth because most maternal and newborn deaths arise from complications during delivery. Even with the best possible antenatal care, it is established that delivery could be complicated and therefore skilled assistance is essential to safe delivery care.

Historical and observation evidence indicates that skilled care during delivery can prevent up to 75% or more maternal deaths⁵. The historical evidence shows that countries that have been able to reduce maternal and child mortality have improved women's access to skilled health professional especially at birth when rapid treatment can make the difference between life and death⁶. The ease and speed with which skilled attendance has been promoted as a global priority is in itself an indication of the urgent need to offer key decision-makers an intervention perceived as feasible, comparatively discrete and intuitively effective.

In realization of this unacceptable level of maternal and child mortality around the globe, in 2000 world leaders committed themselves and set goals commonly known as Millennium Development Goals (MDGs) for accelerating development and reducing poverty. Two of the eight MDGs adopted following the millennium summit involve reducing child mortality and improving maternal health (MDG 4 & 5). In MDG 5, countries have committed to reducing the maternal mortality ratio by three-quarters between 1990 and 2015¹. However, between 1990 and 2005, the maternal mortality ratio declined by only 5%¹. To measure the achievement of this goal (MDG5), two indicators: maternal mortality ratio and proportion of births attended by skilled attendants were selected. To ensure skilled attendance at birth for all women, the international community set a target of 80% by 2005, 85% by 2010 and 90% coverage by 2015. However, in 2008 only 65.7% of all women were attended to by a skilled attendant during pregnancy, childbirth and immediately postpartum globally with some countries having less than 20% coverage⁵.

Although globally the proportion of births assisted by skilled attendants has been steadily rising from 47% in 1990 to 62% currently, progress needs to be accelerated. Sub-Saharan Africa, South-East Asia and the Caribbean are furthest away from achieving the universal coverage agreed on by WHO member states in 2005¹. In Zambia, maternal mortality is unacceptably high and its reduction is a priority area for the government and indeed the ministry of health and ministry of community development mother and child health. However, whilst antenatal care is nearly universal, delivery and postpartum care is generally low⁷. It is documented that only 47% of deliveries around the country take place in health facilities, where as more than half of Zambian births (52%) occur at home attended to by a traditional birth attendant or a relative⁷. This situation is worrying and poses a tough challenge to the attainment of the MDG focusing on maternal and child health.

It has been reported that women in rural areas are less likely (28%) to deliver in public sector facilities than their counterparts in urban areas (79%). Northern province has the lowest proportion of deliveries in public sector facilities (26%), while Lusaka has the highest (76%)⁷. Kasama district has low institutional deliveries and therefore, few deliveries attended to by skilled birth attendants with more than half (56%) of pregnant women delivering at home⁸.

According to the 2007 Zambia Demographic and Health Survey (ZDHS), majority (94%) of pregnant women receive antenatal care from a skilled provider (99% in urban, 91% in rural), while only 47% of births are conducted by skilled personnel. In the absence of a nurse or a midwife, a relative (without the necessary life saving skills), is the most common person assisting at a delivery (25%)⁷.

There are many unclear reasons as to why women may fail to utilize the services of skilled attendants at birth. Therefore, it is important that these factors are investigated.

MATERIALS AND METHODS

The study was conducted in Kasama district of Northern Province in Zambia. Kasama district had been selected because it is one of the districts with the lowest institutional deliveries in Zambia. Northern Province has nine administrative districts with Kasama district being the administrative headquarters. It is 860km from Lusaka the capital city of Zambia. The area of the district is 10788 square kilometers. Its population was estimated at 238,035 with a growth rate of 3.4% (CSO, 2010).

The study population comprised a cross section of mothers of child bearing age (15- 49 years) accessing health services in selected government health institutions and living in Kasama district while the target population included women who had children aged six months and below and those who may have lost a child during or after delivery in the first two quarters of 2011 accessing various health services at three selected health centres under study namely Location, Lukupa and Chisanga regardless of whether they had attended ANC or not. Health center staff and traditional birth attendants providing maternal and child health services were also included in the study to substantiate the information obtained from eligible women. A case control study design was used. In this study, the exposure of interest was skilled delivery and therefore the exposed were women who were delivered by unskilled birth attendants while the unexposed were those who were delivered by skilled birth attendants. Mothers who were delivered by skilled birth attendants were controls while those who were delivered by unskilled birth attendants were cases. Eligible cases included women who were delivered outside a health facility by unskilled attendants within the first six months of 2011

and residing within villages around the selected health centres in Kasama district while the eligible controls included women who were delivered at a health facility by a skilled birth attendant within the first six months of 2011 and residing within villages around the selected health centres in Kasama district.

The sample size was calculated using Pocock formula. The study was designed to allow an absolute sampling error of up to 5%, with the power of study at 95% and therefore the total sample size calculated was 340 (170 cases and 170 controls). Eligible women from the community were mobilized by the local leadership (i.e. NHC, headmen, teachers, church leaders etc) to come for interviews at the nearest health facility. Also all eligible mothers in child bearing age (15 to 49 years) bringing children for the under-five clinic, postnatal mothers and mothers accessing other health services in government clinics were targeted. A maximum of 60 women were selected per each health center using systematic random sampling method.

Triangulation approach method was used to collect data as follows; Information from women participants was collected using interviewer-administered questionnaire, designed by the investigators and pre-tested prior to use. The questionnaire was written in English and was administered by three trained local interviewers and the investigator in the language the respondents understood better. The questionnaire comprised questions on socio-demographic characteristics, past obstetric history, knowledge on danger signs of pregnancy, labour and puerperium, assistant at delivery, and practices and beliefs pertaining to labour and delivery.

Three focus group discussions each comprising a group of ten women who included the health centre staff, women aged 15-49 years and TBAs were conducted in three selected health centers. One focus group discussion at semi-urban location and two from rural settings. The FGDs collected in-depth information on places where women deliver from and the reasons for the choice of these places, the preparations women make for delivery, assistance during delivery, practices/customs pertaining to delivery, use of traditional medicine during pregnancy, labour and after delivery, complications of delivery by unskilled attendants and perception of male midwives by the community.

Data entry was performed using EpiData and analysis by Statistical Package for Social Sciences (SPSS) version 21. The open ended responses were assigned codes to bring related issues together under themes. The quantitative data were entered with EpiData and analysis was done using SPSS 21.0 for windows after all variables were coded. Bivariate analysis was done with Chi-square test in order to determine the association between independent and dependent variables. The confidence interval was set at 95%. A result yielding a p value of less than 5% was considered to be statistically significant.

Qualitative data was analyzed using content analysis method. Using this method, a report of the proceedings of the focus group discussions were prepared in which some participants' own words were recorded and reflected the key statements, ideas and the attitudes expressed by the participants. The results and findings were interpreted and the most useful quotations that emerged from the discussion to illustrate the main ideas were selected. The data summary was then done with the use of narratives.

Since the whole methodology approach had used triangulation method, data from questionnaires and focus group discussions were analyzed simultaneously in relation to the literature review.

Ethical approval for this study was obtained from the biomedical research ethic committee, University of Zambia.

Written informed consent was obtained from each respondent before the interview. Permission to carry out the study was sought from Kasama district community medical office.

The study had some limitation because all the eligible respondents that were mobilized from the community as well as eligible women found at the health centers, were enrolled and interviewed right at health facilities because of conduciveness and easy access. Hence these eligible women that managed to come to the health facilities and those already found at health facilities were more likely to have utilized the services of skilled attendants in the past. Therefore, there was a possibility of selection bias.

The other limitations of the study were financial constraints. Sampling bias may have been inadvertently introduced due to purposely restricting respondents to births within 6 months of survey.

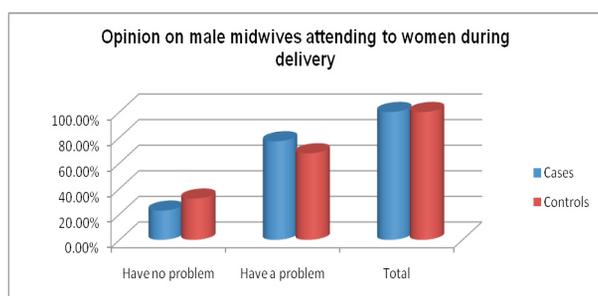
Recall bias – The recall period in the study was maintained at 6 months, but this was still a sufficiently long period to be affected by recall bias.

The convenience sampling method employed in generating the quantitative data; recruitment of study participants from health care facilities and the subsequent interviews with those women conducted at health facilities are limitations. Women may have not been comfortable enough within the health facility environment to talk freely and openly. Fear may cause courtesy bias.

RESULTS

The study found out that women are shunning delivery in health facilities by skilled attendants because of the presence of male midwives at delivery centres as they feel that it is against their tradition for men other than their husbands to see their nakedness (p value = 0.005). Majority of the cases 131(77.1%) said they had a problem with male midwives attending to women during delivery compared to the controls 115(67.7%). Respondents who were not comfortable with male midwives attending to women during labour/delivery were 1.271 [OR (95%CI) = 1.271 (1.029, 1.570)] more likely to be delivered by unskilled birth attendants than those who were comfortable about it. Refer to figure 1.

Figure 1: Opinion of male midwives attending to women during delivery by skilled delivery

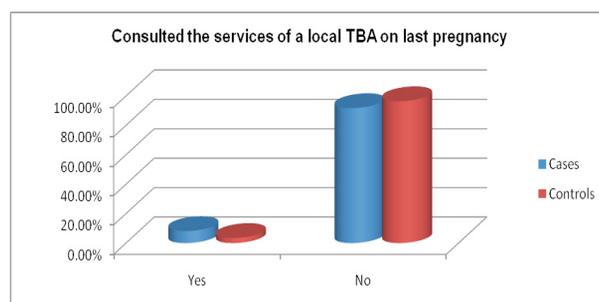


The presence of TBAs in respondents' areas was not significantly associated with skilled delivery (p value 0.905). Almost an equal number of the controls 82(48.8%) and cases 81(48.2%) said they had no traditional birth attendants in their areas. However, 58(34.5%) of the controls said they had traditional birth attendants in their areas compared to 54(32.1%) of the cases. Respondents who had no traditional birth

attendants in their areas were 1.055 [OR (95%CI) = 1.055 (0.844, 1.318)] more likely to be delivered by unskilled birth attendants than those who had.

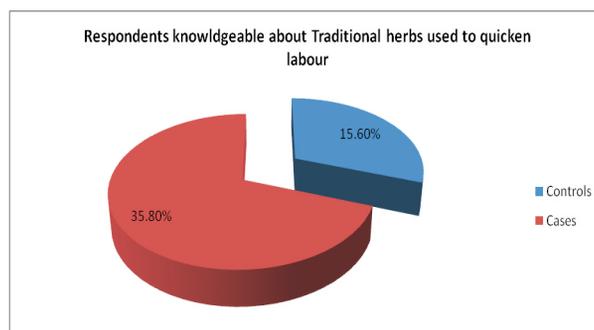
Consultation of the services of the local TBAs by the respondents was not significantly associated with skilled delivery (p value 0.087). Fourteen (8.2%) of the cases consulted the services of their local traditional birth attendants compared to the controls 6(3.5%). Respondents who consulted the services of their local TBAs on their last pregnancy were 1.451 [OR (95%CI) = 1.451 (1.065, 1.976)] more likely to be delivered by unskilled birth attendants than those who did not. Refer to figure 2.

Figure 2: Consultation of the services of local TBAs on last pregnancy by skilled delivery



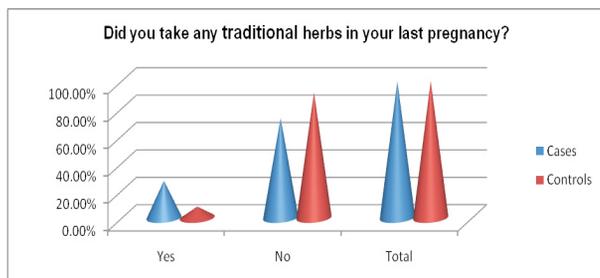
The respondents' knowledge of traditional herbs used to quicken labour was significantly associated with skilled delivery (p value 0.001). Respondents who had knowledge of traditional herbs used to quicken labour were 1.617 [OR (95% CI) = 1.617 (1.322, 1.978)] more likely to be delivered by unskilled birth attendants than those who had no knowledge. Majority of the cases 59(35.8%) had knowledge of herbs used to quicken labour compared to the controls 26(15.6%). Figure 3.

Figure 3: Respondent's knowledge of traditional herbs used to quicken labour by skilled delivery



Intake of traditional herbs in the last pregnancy by respondents was significantly associated with skilled delivery (p value 0.0001). Majority of the cases 46(27.1%) took the traditional herbs in their last pregnancy compared to the controls 14(8.2%). Respondents who took the traditional herbs on their last pregnancy were 1.717 [OR (95% CI) = 1.717 (1.407, 2.096)] more likely to be delivered by unskilled birth attendants than those who did not take the traditional herbs. Refer to figure 4.

Figure 4: Did you take any traditional herbs in your last pregnancy by skilled delivery



The knowledge levels respondents had of danger signs and symptoms of pregnancy was significantly associated with skilled delivery (P value, 0.001 respectively). Sixty seven point seven percent of the cases and 52.9% of the controls perceived dizziness as not being dangerous during pregnancy while majority of the controls 99(58.2%) and cases 93(54.7%) perceived fitting as not being dangerous during pregnancy.

The other factors affecting women's utilization of skilled attendants at birth included the socio economic status of a woman. Majority of the respondents lived below the poverty datum line as a number of them had an income below KR200 (65.9% of cases and 51.2% of the controls).

Younger women (15-24 years) were 0.714 [OR (95% CI) = 0.714 (0.571, 0.894)] more likely to be delivered by skilled birth attendants than older women (35-46 years). The mean age was 27(SD \pm 6.7 and the median was 26. Higher rates of utilization were observed among respondents who walked less than 30 minutes to get to the nearest health facility. Respondents who walked less than 30 minutes to get to the nearest health facility were 0.351 [OR (95%CI) =0.351 (0.235, 0.524)] more likely to deliver in health facilities and to be delivered by skilled birth attendants than those who walked more than 30 minutes. Majority of the controls 73(43.7%) walked less than 30 minutes to get to the nearest health facility

compared to cases 20(11.8%). The mean hours were 2.4, SD \pm 1.1, median 2.000.

Women who had 1-4 pregnancies were 0.856 [OR (95%CI) = 0.856 (0.624, 1.173)] more likely to be delivered by skilled birth attendants than those who had more than four pregnancies. The mean number of pregnancies was 3.7, SD 2.3, median 3.0.

Respondents who attended 1-4 visits were 0.983 [OR (95%CI) = 0.983 (0.682, 1.417)] more likely to be delivered by skilled birth attendants. The mean antenatal attendance was 3.5 times, SD \pm 1.1, median 3.0.

Majority of the controls 58(34.1%) first attended ANC at four months gestation compared to the cases 55(33.7%).The mean gestation age was 4.8 months, SD 1.3, median 5.0. Majority of the cases 98 (57.7%) and controls 104 (61.2%) attended ANC in order to know the health of the baby and their general health status, while a good number of the controls 11(6.5%) and cases 6 (3.5%) attended ANC in order to obtain an antenatal card so they could deliver from the health facility. Respondents who did not attend ANC said they did so for fear of being laughed at (85.7%) and because of lack of transport (14.3%).

The focus group discussions also reviewed that majority of the pregnant women take herbs to quicken labour and prevent obstructed labour and that most of them are not comfortable to be attended to by male midwives during delivery because it is against their customs.

DISCUSSION

One of the most interesting findings of this study was that there was no significant association between the presence of TBAs in the area and skilled delivery ($P= 0.905$). This shows that presence of the TBAs in an area did not influence whether the woman was going to be delivered by a skilled attendant or not. There was also no significant association between consultation of the services of the local TBAs and place of delivery ($P= 0.087$). This shows that it did matter whether the woman consulted the services of a TBA or not for her to be delivered by a skilled attendant.

The study however clearly demonstrates that the presence of male midwives at health facilities is adversely affecting the women's utilization of skilled services at delivery. Majority of the women are not comfortable to be attended

to by male midwives especially during labour and delivery. The study found out that there was a significant association between the opinion the women had on male midwives attending to women during delivery and skilled delivery ($P=0.005$). Majority of the cases said they had a problem with male midwives attending to women during delivery compared to the controls. Very few cases said they had no problem with it.

The study also found out that there was a significant association between the knowledge the woman had of traditional herbs that can be used to quicken labour and skilled delivery ($P=0.001$). This shows that knowledge of traditional herbs had an influence on whether the woman was delivered by a skilled attendant or not. Majority of the cases 59(35.8%) said they had knowledge of traditional herbs that can be used to quicken labour compared to the controls 26(15.6%). This finding is in line with the FGD in which most women agreed that majority of the women take traditional herbs during pregnancy as a preventive measure of obstructed labour.

Other factors that did not influence the women's utilization of skilled attendants at birth include: education (p value= 0.284), employment status of a woman (p value= 0.0057), marital status (p value = 0.903), monthly income (p value= 0.198), attendance of antenatal care (p value = 0.071), gestation age at booking (p value = 0.272), parity (p value = 0.341) and being given IEC during the antenatal visits (p value = 0.184) and type of information (p value= 0.358).

According to this study, there was a significant association between the age of the client and use of skilled assistant at delivery ($P=0.025$). Therefore the age of the woman during pregnancy had an influence on the woman's choice of place of delivery and use of skilled assistant at birth. Younger women (15-24 years) were more likely to deliver in health facilities and to be delivered by skilled birth attendants than older women. Similar studies done in Tanzania to look into factors influencing utilization of skilled attendants at birth, also showed that the proportion of women who were attended to by a skilled attendant decreased significantly with increasing age of a woman from 57.5% among women below 20 years of age to only 48.8% among women 35 years or more⁹.

This study found out that the educational and employment status of a woman did not have an influence

on the pregnant woman's choice of place of delivery and use of skilled assistant at delivery ($P=0.284$ and 0.0057 respectively). Therefore educational / employment status of the woman did not determine whether a woman was going to use skilled delivery services or not. Similar studies done in Gambia also show that there was no significant association between educational status and place of delivery¹⁰. Another study done in rural Nigerian women (Turner, 1991) found that 80% of the women with secondary education and above delivered from health facilities compared to 40% with primary education¹¹.

The findings on marital status agree with Mpembeni's study in Tanzania which stated that a significantly higher proportion of women who were single delivered with a skilled attendant compared to their married counterparts⁹. It is said that a woman who is educated, single and of higher social economic status is able to make wise decisions about her health than her married counterparts¹⁰. In this study, the marital status of a woman did not influence the woman's utilization of skilled attendants at birth (p value = 0.903).

One of the shocking findings of this study was that there was no significant association between the family's monthly income and choice of skilled assistant at delivery ($p=0.198$). The study discovered that majority of the respondents lived below the poverty datum line as a number of the cases and controls had an income below K200.

Several studies have found that physical proximity of health care services, especially in the developing countries, plays an important role in the utilization of these services. Distance to the nearest health facility has an influence on the choice of the place of delivery. As noted by Nwakoby¹², the use of comprehensive health services showed decline with increasing distance from the woman's residence. Stekelenburg¹³ working in Zambia found that although 96% of the respondents preferred delivering in health facilities, only 54% actually did, because of long distances and the lack of transport. The findings agree with this study where distance to the health facility was found to influence use of skilled attendants at birth ($p=0.001$). A good proportion of women walked 1-2 hours to get to the nearest health facility.

In this study knowledge levels of danger signs of pregnancy, labour and postpartum among women was

found to strongly influence women's utilization of skilled attendants at birth ($p = 0.001$). Studies conducted among women in Tanzania¹⁴, Ethiopia¹⁵ and Burkina Faso¹⁶ indicate low levels of awareness of obstetric danger signs during pregnancy, delivery and postpartum. Similarly studies have also indicated low rates of birth preparedness among women in Kenya¹⁷, Ethiopia¹⁵ and Burkina Faso¹⁶. The low awareness of danger signs coupled with lack of preparedness contributes to the delay in seeking skilled care henceforth leading to high levels of maternal and child mortality and morbidity.

The findings on parity and attendance of antenatal care contrast other researchers who have found an association between parity/ attendance of antenatal care and skilled delivery. In this study, almost all of the cases and controls attended antenatal on their last pregnancy. However, it was found that attendance of antenatal care did not influence a woman's use of a skilled attendant at birth ($p=0.071$). This could mean that women are not given adequate information during antenatal on the importance of skilled delivery.

CONCLUSION AND RECOMMENDATIONS

The study found out that women are shunning delivering in health facilities by skilled attendants because of the presence of male midwives at the health facilities. Therefore, there is need for the district health office to work with the local leadership and TBAs to sensitize the people in the community and dispel some of the myths and misconceptions and change some of the traditional beliefs.

Deliberate programs should be put in place to encourage male involvement in reproductive health services in order for them to support their spouses and encourage them to deliver from health facilities.

There is need to conduct mass education in the communities to sensitize the people on the importance of seeking advice from qualified health personnel when they encounter problems during pregnancy instead of resorting to taking traditional herbs as most of these herbs could be harmful to the developing fetus and may endanger the life of the mother and her unborn child.

The district should come up with plans to deal with the problem of long distances since majority of the women fail to utilize the services of skilled attendant at birth

because of long distance. Services should be taken closer to the people to ensure accessibility. This can be done through outreach services or by building mothers' waiting shelters at health centres so that women who live in far flung areas could await their labour there.

The district medical office should encourage TBAs to continue providing antenatal services and sensitization of people in the communities on health issues. They can use them to identify pregnant women with health problems in the communities and facilitate their referral. They can also be called upon to escort women in labour to the health facilities for delivery.

There is need to empower the women economically since those who are under privileged economically may fail to utilize the services of skilled birth attendants.

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